Exp. Type	Exp. Time (s)	Al. Gap (µm)	Exp. Gap (µm)	WEC-Offset (µm)	WEC Type	HC Wait T. (s)	Pre. Vac (s)	Full Vac (s)	Vac Purge (s)
Flood-E	X			X					
Prox	X	X	X	X	X				
Soft	X	X		X	X				
Hard	X	X		X	X	X			
Low Vac	X	X		X	X		X	X	X
Vac	X	X		X	X		X	X	X

Parameter	Description	Recommended Setting	Range
Exp. Type	Type of exposure	N/A	See table
Exp. Time	Time of exposure	N/A	0.1 - 999.9
Al. Gap	Alignment distance during the alignment	N/A	10 - 300
Exp. Gap	Distance during exposure in proximity mode	N/A	0 - 300
WEC-Offset	Substrate position offset in respect to 0 position (parallel)	0	50 to -50
WEC Type	Type of the Wedge Error Compensation	Cont	Cont or Spacer
HC Wait T.	Time for N2 purge under the wafer prior to exposure in hard contact mode	5	0 - 30
Pre. Vac	Time of the pre-vacuum with reduced vacuum pressure before exposing in vacuum contact modes	5	0 - 30
Full Vac	Time of full vacuum before exposing in vacuum contact modes	5	0 - 30
Vac Purge	N2 purge time into the vacuum chamber after exposure in vacuum contact modes	5	0 - 30

Exposure Types

- Flood Exposure: It is possible to exposure the whole wafer without a mask. After this mode is selected, the exposure can be started from the initial state by pressing the EXPOSURE key. The exposure takes place as long as the exposure time was set independent if a mask (and mask holder) is loaded or not.

- Proximity Exposure: This is the most careful exposure for the mask. Mask damage is reduced to a minimum, but the structural resolution is not as high as with any contact exposure. Between mask and wafer is a set distance, the exposure gap.

- Soft Contact Exposure: Mask and wafer are brought in contact. The structural resolution is better than in proximity exposure. The vacuum securing the wafer onto the chuck is maintained during exposure. The only force to press the wafer against the mask is the force applied during WEC.

- Hard Contact Exposure: This is similar to soft contact mode. After the wafer has moved into contact the vacuum underneath the wafer is switched off and nitrogen is purged under the wafer instead. So a closer contact between wafer and mask is guaranteed, even with large wafers.

- Vacuum Contact Exposure: This mode performs the highest resolution levels. After the WEC and alignment the wafer is brought into contact with the mask. The rubber seal of the vacuum chuck creates a mini chamber between mask and wafer. The rubber seal pressure is adjustable by the VACUUM SEAL knob (recommended starting point is between 0.1 and 0.2 bar). This chamber is evacuated in steps. Pre vacuum gently pulls vacuum into that mini chamber to enable a smooth contact between mask and wafer. Furthermore, it prevents gas bubbles to be trapped between both. Full vacuum will be applied with the next step. The vacuum securing the wafer on the chuck is replaced by nitrogen. In this mode the best contact between mask and wafer is achieved. After the exposure, nitrogen will purge into the mini chamber to break the vacuum. The larger the wafer the longer the vacuum and purge times.

- Low Vacuum Contact Exposure: This mode is similar to vacuum contact with one difference; The vacuum level in the wafer chamber can be adjusted by the LOW VACUUM ADJUSTMENT knob. So the high resolution level of the vacuum contact exposure can be combined with a minimum mechanical stress for wafer and mask.